Title (en)
Detection of hard-disc defect regions using soft decisions

Title (de)
Erkennung von Festplattenfehlern durch weiche Entscheidungen

Title (fr)
Détection des défauts d'un disque dur utilisant des décisions douces

Publication
EP 2372714 A3 20150415 (EN)

Application
EP 11001387 A 20110219

Priority
US 73138110 A 20100325

Abstract (en)
[origin: EP2372714A2] In a hard-disc drive, a defect region on the hard disc is detected by generating two statistical measures (e.g., $²1(k)$ and $²2(k)$) based on signal values (e.g., $x[n]$ or $y[n]$) and soft-decision values (e.g., $L[n]$) corresponding to the signal values. The measures are compared to detect the location of the defect region of the hard drive. Using the soft-decision values reduces fluctuations in a ratio of the statistical measures compared to a ratio formed from statistical measures that are not based on soft-decision values, resulting in a more-reliable test for detecting defect regions.

IPC 8 full level
G11B 20/18 (2006.01); **G11B 20/10** (2006.01); **H03M 13/41** (2006.01)

CPC (source: EP KR US)
G11B 20/10009 (2013.01 - EP US); **G11B 20/18** (2013.01 - KR); **G11B 20/1816** (2013.01 - EP US); H03M 13/41 (2013.01 - EP US)

Citation (search report)
- [X] WO 2009045203 A1 20090409 - AGERE SYSTEMS INC [US], et al
- [A] US 2009271670 A1 20091029 - TAN WEIJUN [US], et al
- [A] US 2003026185 A1 20030206 - FUJIWARA TORU [JP], et al
- [A] WO 2007027054 A1 20070308 - SAMSUNG ELECTRONICS CO LTD [KR]

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 2372714 A2 20111005; **EP 2372714 A3 20150415**; CN 102201265 A 20110928; CN 102201265 B 20131106; JP 2011204348 A 20111013; JP 5134105 B2 20130130; KR 101292031 B1 20130801; KR 20110107751 A 20111004; TW 201142834 A 20111201; TW I433139 B 20140401; US 2011235204 A1 20110929; US 8089713 B2 20120103

DOCDB simple family (application)
EP 11001387 A 20110219; CN 201110069300 A 20110322; JP 2011066866 A 20110325; KR 20110025165 A 20110322; TW 100107608 A 20110307; US 73138110 A 20100325